Analysis of Cost Recovery for High-altitude Rescues on Mt. McKinley, Denali National Park and Preserve, Alaska

Introduction

Public Law 106-486 was enacted into law on November 9, 2000, requiring the National Park Service to complete a mountain climber rescue cost recovery study by August 9, 2001. In part, the law reads:

"...the Secretary of the Interior, (hereinafter referred to as the "Secretary") shall complete a report on the suitability and feasibility of recovering the costs of high altitude rescues on Mt. McKinley, within Denali National Park and Preserve. The Secretary shall also report on the suitability and feasibility of requiring climbers to provide proof of medical insurance prior to the issuance of a climbing permit by the National Park Service. The report shall also review the amount of fees charged for a climbing permit and make such recommendations for changing the fee structure as the Secretary deems appropriate."

The three parts of this report address the requirements in Public Law 106-486:

- 1. Recovering the costs of rescues on Mt. McKinley.
- 2. Requiring climbers to provide proof of medical insurance prior to the issuance of a climbing permit.
- 3. Charging for a climbing permit and changing the fee structure.



Mountaineering rangers practice rescue operations.

Rescue in the National Park Service and Denali National Park and Preserve

In 1916 Congress created the National Park Service in the Department of the Interior 16 U.S.C. 1:

To promote and regulate the use of the Federal areas known as national parks, monuments, and reservations . . . by such means and measures as conform to the fundamental purpose of said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The basic authority for the National Park Service to provide Search and Rescue (SAR) services is found in 16 U.S.C. 12, which in part says:

The Secretary of the Interior is authorized to aid and assist visitors within the national parks or national monuments in emergencies . . .

National Park Service Management Policy on Search and Rescue (SAR) states:

The saving of human life will take precedence over all other management actions.

Additionally...

To provide for the protection and safety of park visitors, the National Park Service will make reasonable efforts to search for lost persons and to rescue sick, injured, or stranded persons. This responsibility may be fulfilled by National Park Service staff or by qualified search and rescue organizations or agencies that are capable of responding effectively to life-threatening emergencies... Deceased persons will be evacuated unless the level of risk to the rescue party is determined to be unwarranted. Search managers and superintendents will jointly determine when to terminate a search.

Protecting visitors extends back to the earliest days of our national parks. The tradition began in Denali National Park and Preserve (DNP&P) in 1932 when the first notable rescue and body recovery occurred. A climbing party led by Superintendent Harry J. Liek discovered the body of Theodore Koven on the Muldrow Glacier. They brought the body off the mountain and aided another member of the team who was sick.

Technological improvements and capabilities, improved visitor access, and growth in outdoor related adventure recreation have allowed more visitors to enjoy this country's wild areas. The National Park Service is responding to the additional visitation with increased infrastructure, administration, and public services. The increased use of public

lands has also increased the cost associated with SAR. Media interest in these incidents has also grown, particularly in the more dramatic mountain rescues.

The issue of SAR cost recovery is not new to the National Park Service or DNP&P. The topic was reviewed in 1940 by the Director of the Park Service¹ and subsequently by DNP&P. DNP&P looked into SAR cost recovery after the 1967 Wilcox climbing tragedy when nine climbers perished high on the Muldrow Glacier route. Noted mountaineer/scientist/photographer Brad Washburn assisted the Park Service in reviewing cost recovery options. In 1976, chief mountaineering ranger Bob Gerhard addressed the subject. In 1993, a servicewide review of SAR cost recovery was explored at the request of Secretary of the Interior Bruce Babbitt. On each occasion, the National Park Service elected not to pursue SAR cost recovery as it related to mountaineering.

Historical Data on SAR Incidents and Costs

The table below summarizes the mountaineering program costs at Denali NP&P for the last three fiscal years. The bar graph on page five illustrates the volume of all kinds of recreation rescue incidents that occurred nationwide in the Park Service during the year 2000. The pie chart at the bottom of page five illustrates that 13 of the 175 national climbing incidents occurred at Denali NP&P.

Denali NP&P Mountaineering Operations Budget

	FY2000	FY1999	FY1998
Mt. McKinley Base Budget	_		
Personal services	\$307,600	\$271,200	\$253,100
Supplies/equipment	150,900	80,800	138,900
Helicopter	156,800	222,800	65,600
Climber Services	169,400	163,000	159,300
Military Support	129,000	127,700	126,400
NPS & Military SAR	348,000	218,800	527,700
TOTALS	\$1,261,700	\$1,084,300	\$1,271,000

Base Budget: personal services costs for mountaineering rangers, administrative

support staff, training,

Lama high-altitude helicopter cost for mountaineering

support not related to rescues, supplies, materials, equipment, utilities,

loss-of-life claim payments.

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¹ MEMORANDUM for the Washington Office and all Field Offices: March 29, 1940, From Arno B. Cammerer, Director, National Park Service

Climber services: expenditures of fees collected to help cover cost of

providing education services, processing/printing permits,

producing mountaineering guides, and producing informational packets for climbers.

NPS Search and Rescue: volunteer salaries,

premium pay costs for Denali employees during SAR operations,

Lama rental and hourly usage costs,

emergency supplies

Military SAR Support: value of military support during SAR operations

Military Support: value of military support for setting up and demobilization

of base camps

The following explains the cost of the high-altitude helicopter and is not in addition to the above table:

High-altitude Helicopter (Lama) Program Funding Source

	FY2000	FY1999	FY1998
Denali Park Base Budget	\$156,800	\$222,800	\$ 65,600
NPS Search and Rescue	190,000	103,200	206,200
(National SAR Account)			
TOTAL:	\$346,800	\$326,000	\$271,800

Denali Base Budget: minimum contract cost not covered by SAR funding,

salary cost for NPS helicopter manager, mountaineering/resource

protection support not related to

SAR,

rental of helicopter pad in Talkeetna

NPS Search and Rescue: volunteer salaries,

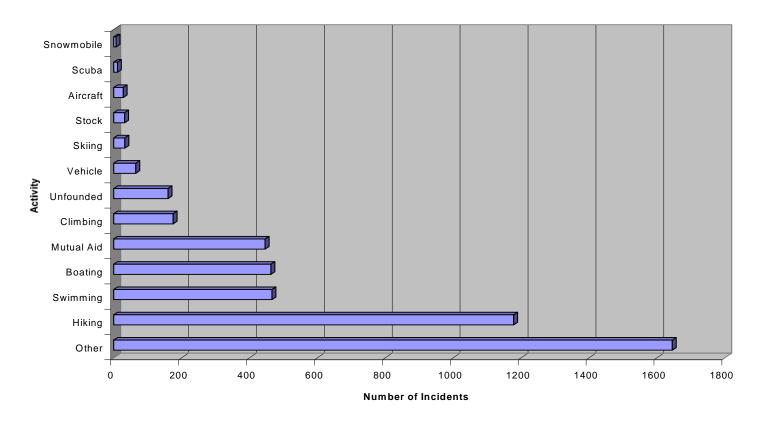
premium pay cost for Denali employees during SAR operations, Lama rental and hourly usage cost during SAR operations,

emergency supplies

Year	Number of Climbers	Number of mountain rescues*
1995	1220	12
1996	1148	13
1997	1109	10
1998	1166	9
1999	1183	9
2000	1209	13
Total:	7035	66

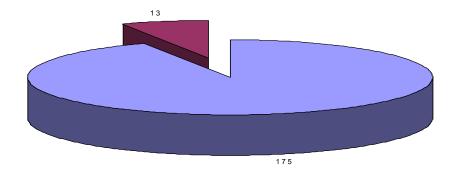
^{*}SARs costing more than \$500.00

Park Service Reported Incidents 2000



Park Service Climbing Incidents





PART ONE The Suitability and Feasibility of Rescue Cost Recovery



Mountaineering rangers practice loading patient into high-altitude helicopter.

Background

Cost recovery for SAR is influenced by many factors, including national and departmental policy, Federal Tort Claims Act, discretionary SAR function, operations of other emergency organizations, and the overall appropriateness and ramifications of such actions.

National Policies

The Independent Offices Appropriation Act (IOAA) 31 U.S.C. § 9701, provides that,

- (B) The head of each agency . . . may prescribe regulations establishing the charge for a service or thing of value provided by the agency. Regulations prescribed by the heads of executive agencies are subject to policies prescribed by the President and shall be as uniform as practicable. Each charge shall be-
 - (1) fair; and
 - (2) based on
 - (A) the costs to the Government;
 - (B) the value of the service or thing to the recipient;
 - (C) public policy or interest served; and
 - (D) other relevant facts.

The Office of Management and Budget (OMB) provides guidance through published circulars. Circular A-25 specifically addresses "User Charges" and fees for government service. It "establishes Federal policy regarding fees assessed for Government services... [and] it provides information on the scope and types of activities subject to user charges and the basis upon which user charges are to be set."

While Circular A-25 does provide that "A user charge... will be assessed against each identifiable recipient for special benefits derived from Federal activities beyond those received by the general public," it also states that "No charge should be made for a service when the identification of the specific beneficiary is obscure, and the service can be considered primarily as benefiting broadly the general public." Since SAR services in DNP&P are routinely provided to all park visitors in need of assistance or aid, charging one "identifiable recipient" may require charging all others. Circular A-25 further notes that "agency heads or their designee may recommend to the OMB that exceptions to the general policy be made when... any other condition exists that, in the opinion of the agency head or his designee, justifies an exception."

On this issue of SAR cost recovery, NPS Management policy states that,

"The National Park Service will not charge visitors for search and rescue operations."

The United States National Search and Rescue Plan also speaks directly to SAR cost recovery. The plan is a document signed by the Departments of Commerce, Defense, Interior, and Transportation, as well as the Federal Communications Commission and National Aeronautics and Space Administration. In it, the participants,

"...agree that SAR services that they provide to persons in danger or distress will be without subsequent cost recovery from the person(s) assisted."

and...

"In accordance with customary international law, when one nation requests help from another nation to assist a person(s) in danger or distress, if such help is provided, it will be done voluntarily, and the U.S. will neither request nor pay reimbursement of cost for such assistance."

Federal Tort Claims Act (FTCA)

The FTCA states that federal agencies will be held liable for tort actions in the same manner and extent as private individuals under like circumstances. The agency is not subject to lawsuit, however, for any claim "...based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused."

The statute authorizing the National Park Service to provide SAR does not require the agency to provide any services at all or particular services in specific situations. If an SAR cost recovery program were implemented in some fashion that required those rescued to pay the cost of the rescue, the courts could change the way they address applicability of the FTCA. The impact, if any, is dependent on the type of cost recovery implemented. As no public entities in the United States are currently attempting to recover SAR costs, there is no court precedent to refer to. The views of the Department of Justice, the department charged with representing the United States in litigation, should be sought before making any legislative or administrative decisions to implement SAR cost recovery.

Any implementation of SAR cost recovery on Mt. McKinley may also greatly affect state, national, and international governments that provide SAR. Additionally, public interest, local managers and Park Service employees will be significantly affected if an SAR cost recovery program is adopted.

United States Military, United States Coast Guard, and Parks Canada

The Departments of Defense and Transportation are signatories to the United States National SAR Plan. They do not charge for rescues and have no current plans to change their positions. Parks Canada does not charge for SAR either, while providing hundreds of missions each year. The largest SAR provider—the U.S. Coast Guard—has not participated in rescue activities at Mt. McKinley. They do not engage in rescue cost recovery for recreational boaters or other pursuits that may be considered "high risk" such as SCUBA diving, yacht races, and "around the world hot air ballooning."

The U.S. military assists with SAR on Mt. McKinley. Included are the Eleventh Rescue Coordination Center (RCC), Alaska Air National Guard; Two Hundredth and Tenth Combat Rescue Squadron, Alaska Air National Guard; and the One Hundredth and Twenty-Third Aviation Regiment, U.S. Army at Fort Wainwright.

SAR missions on Mt. McKinley provide unique and valuable training opportunities for the military. These missions prepare military personnel for other SAR operations, such as commercial airliner emergencies in high-altitude mountains. Lt. Col. Parkhouse, former commander of the Air National Guard 210th Combat Rescue Squadron, stated in congressional testimony that, "I cannot think of better training for a combat mission than going out and performing actual search and rescue missions." Para-jumpers from the squadron describe these missions as "combat multipliers." Combat multipliers increase their skill and capability to respond to other rescue and military maneuvers.

Sometimes the military assigns a "cost factor" to the services of the military for both training and SAR response on Mt. McKinley. When analyzed, the costs of equipment, personnel, and supplies make the total cost of a rescue appear quite expensive. There are minimal increased "costs" when the military participates in rescues on Mt. McKinley. Military participation in civilian search and rescue nationwide takes the place of rescue training that would otherwise occur in the absence of civilian needs. If Mt. McKinley

were closed to climbing, the army would still train the same number of hours for similar high-altitude emergencies. Army Regulation 500-2, applicable to Active Army, U.S. Army Reserve, and Army National Guard Alaska states,

- a. The armed Forces of the United States provide SAR support for their own operations. In addition, they have traditionally accepted, to the extent possible, a moral and humanitarian obligation to aid nonmilitary persons and property in distress.
- b. The department of the Army will make Army resources available to support the National SAR Plan, as required, on a noninterference basis with primary Army missions. Army resources will be effectively integrated and coordinated in support of the National SAR Plan.

Although the primary responsibility of the military is combat readiness, the U.S. Army of Alaska (USARAK) has additional responsibilities, or its Mission Essential Task List (METL). These METLs include SAR preparedness and response, which may include rescues on Mt. McKinley, airliner mishaps or other incidents in Alaska of a similar nature. USARAK Regulation 525-4 states in Section 5 that SAR missions will be conducted,

...when it appears that a SAR operation is necessary to preserve human life, and is likely to result in saving life.

Appendix A of Regulation 525-4 lists the U.S. Army's responsibilities. It states that that the U.S. Army has

...the sole responsibility for conducting high-altitude helicopter rescue operations for (USARAK) [and to] provide trained and equipped SAR teams for employment as directed and per the internal standing operating procedure.

The U.S. Army would not be relieved of SAR training, preparedness, and response, regardless of climber activity on Mt. McKinley, unless it interferes with combat readiness. Therefore, costs associated with military SAR training would not be eliminated.



U.S. Army helicopter CH47 performs hoist operation at 17,400 feet on the Cassin Ridge of Mt. McKinley.

The State of Alaska

Alaska manages emergency operations through its Department of Public Safety, and the Alaska State Troopers designate an SAR coordinator to direct rescue operations. In congressional testimony, the Alaska State SAR Coordinator stated,

"It is a philosophy of the Department of Public Safety and the Department of Military and Veteran Affairs for the State of Alaska that search and rescue for lost and missing persons is a fundamental duty and responsibility. These agencies do not consider cost of search when making a decision to search. This is a basic service, and part of the public safety responsibility these agencies maintain."

This standard applies to snow machine drivers, hunters, boaters, fishermen, hikers, skiers, and so forth. The State of Alaska does not charge for search and rescue operations.

The National Park Service and Denali National Park and Preserve

Historically, the position of the National Park Service in Alaska has been that charging for SAR could threaten public and rescuer safety. The service also believes that rescues may be more difficult, complicated, and dangerous to perform since there is evidence that charging would cause persons in distress to consider economic factors before notifying officials of their emergencies. Time is extremely important during any emergency, and delays can have serious negative health and safety consequences for the subject.

Authorities prefer to know when visitors are concerned about their well being and feel that delays such as these could jeopardize public safety.



The Lama high-altitude helicopter used for rescues at Denali National Park and Preserve.

Delays in emergency notification because of visitor concerns over cost could also decrease the options and flexibility of rescue managers. Again, time is an extremely important component of rescuer safety, available resources, and rescue management. Additionally, economic and budgetary considerations would greatly affect the management of rescue operations. And after the rescue or recovery is over, there would be pervasive second-guessing of SAR expenditures and the level of rescue complexity.

An option for DNP&P to consider is that of increasing the use of an air ambulance service currently operating in the park. Providence Hospital in Anchorage currently provides Lifeguard Air Ambulance Service for individuals needing transport to an Anchorage hospital from Mt. McKinley base camp at 7,200 feet. Providence Hospital currently only provides this service from the base camp because of decisions it has made regarding helicopter safety considerations and configurations.

DNP&P could pursue with Providence Hospital the possibility of increasing the hospital's operation in the park. A similar program exists at Grand Canyon National Park. At Grand Canyon, the hospital receiving rescue patients charges air ambulance expenses to the patient's insurance company. In this way, the person rescued, not the park, pays for a portion of the costs associated with emergency medical service without the necessity of the park seeking cost recovery.

Mountain Rescue Association, the Access Fund, and the American Alpine Club

Nationally, mountaineering clubs and volunteer SAR providers, such as the 80-unit membership of the Mountain Rescue Association, universally oppose rescue cost recovery related to climbers. Their position is that singling out one user group for the cost of rescue constitutes discrimination, citing that climbers are not the largest or costliest user group when it comes to National Park Service rescue. Climbers are not the

largest beneficiary group of SAR services in the National Park Service, nor are they the most costly recreational users to rescue.

Rescue insurance is available in many countries and forms the basis of cost recovery. In the United States, this insurance is available from the American Alpine Club. It would not cover costs, however, of high-altitude rescues on Mt. McKinley. It is limited to peaks of lower elevation than Mt. McKinley and Mount Foraker.

Conclusions

The current practice of not charging for rescue is a long-standing interagency and intergovernmental policy. To change this long-standing practice and charge for rescue would be a major change for the National Park Service, would be highly controversial, and would be inconsistent with other rescue efforts for similar activities conducted by the military, state, and federal agencies. Historically, the decision of cost recovery has been left to the discretion of agencies. At this time, agencies have not approved SAR cost recovery.

There is also an issue of uniformity of service and policy. Recovering SAR cost on Mt. McKinley from climbers would single out one group of visitors and be inconsistent with the practice in all other federal government agencies of not recovering SAR costs from other visitors participating in similar activities.

Because of public interest, interagency implications, and the long history of providing SAR without cost, any change from the status quo should be addressed by specific legislation and apply to all agencies conducting rescues for high-risk activities, regardless of location (climbing, sailing, small aircraft, hang gliding, and so on).

Part One Recommendations

- 1. Based on the relationship of DNP&P to the national program for National Park Service search and rescue, the relationship to the practices of other federal agencies, the practices of the military, and the practices of the State of Alaska, we recommend that the Park Service continue its current policy of not charging for search and rescue. If other federal agencies and the military develop a policy for the collection of search and rescue costs from participants in high risk activities, the National Park Service should also participate. This would best be done through the passage of legislation that covers all federal agencies and branches of the military that currently rescue members of the public in need.
- 2. To reduce National Park Service costs related to evacuation of injured climbers, the park will work with Providence Hospital in Anchorage, regarding additional operation by the hospital of its Lifeguard helicopter to transport injured climbers from the 7,200-foot base camp on Mt. McKinley. The hospital, like most ambulance services, bills the patient directly for the service. This would reduce the use of military and NPS helicopters for a service that can be provided by a private entity.

PART TWO
Suitability and Feasibility of Requiring Proof of Medical Insurance



Climber with mountain sickness being treated at the 14,200-foot ranger camp.

Background

Are climbers paying their medical bills at Alaska hospitals? Three hospitals where injured climbers are traditionally transported (Alaska Regional, Valley General, and Providence) were queried about this issue. The names of every climber rescued since 1995 were provided to the hospitals. Of the 57 climbers who received medical treatment at Alaska Regional Hospital, five did not pay their medical bills. Valley General and Providence Hospitals failed to respond to our multiple inquiries.

If DNP&P required proof of medical insurance before issuance of a climbing permit, it would set a precedent for the National Park Service. No other park in the system has such a requirement. Payment for medical treatment at a hospital or other medical facility should remain the concern of the facility providing the service.

Conclusions

Requiring proof of medical insurance is not suitable or feasible, based on the low percentage (see page 4) of climbers who actually need rescue. The process to validate a person's medical coverage is extremely complex and would be difficult, if not impossible, to verify for the many international climbers who frequent the mountain. The

National Park Service could encourage climbers to carry medical insurance, but should not become the enforcer. In DNP&P, information on insurance could be provided in preregistration materials and on the park's website. Additionally, DNP&P could work with mountaineers worldwide and encourage them to carry traveler's medical insurance when visiting this country's National Parks. This insurance is readily available.

Part Two Recommendations

- 1. Since the review of incidents shows there is no information indicating a problem of any magnitude, DNP&P recommends not requiring proof of medical insurance at this time. DNP&P will continue to monitor with the hospitals and work with insurance companies to determine if there is a need in the future to require proof of insurance. If this were to be made a new requirement, it would be best to set the precedent consistently across agencies and different types of high-risk activities.
- 2. DNP&P will encourage climbers to carry medical insurance and provide information with registration packets and pre-climb briefings about access to providers who specialize in climbing insurance.

PART THREE Climber Registration Fee Review

Background

The National Park Service collects fees for specific services that benefit certain park visitors. Fee rates can be established to offset the costs of providing services. River rafting in the Grand Canyon and mountaineering on Mt. McKinley and Rainier are examples of registration fees. National Park Service Management Policy states:

Basic services will be available to all visitors free of charge. These services include protection, information and orientation, and interpretation to foster an understanding and appreciation of each park's resources, management policies, regulations, and programs. Fees may be instituted for secondary or special services the National Park Service cannot or elects not to offer because of economic constraints or the need for special skills or equipment, or because they are purely supplemental programs. In all cases, fee programs will support park purposes and comply with appropriate NPS policies and standards.

In 1995, Denali National Park and Preserve revised its regulations regarding mountaineering on Mt. McKinley and Foraker. The major changes to the mountaineering program were:

- 1. A mandatory 60 day pre-registration.
- 2. A \$150.00 per climber registration fee.
- 3. An enhanced preventive SAR and climber education program.

The registration fee currently generates approximately \$160,000 annually. These monies help to defray the cost of Denali's mountaineering and climber safety program but are not used to cover the cost of SARs. Funds provide for improved climber safety and preventive SAR information and programs. These include three important program elements:

- 1) <u>Registration:</u> all climbers requesting to climb Mt. McKinley or Mt. Foraker are mailed an information packet that includes a mountaineering booklet, which is printed and translated into eight languages. Also, the majority of climbers call, email, or fax the ranger station for additional information before their climb.
- 2) <u>Pre-climb:</u> all visitors receive PowerPoint registration programs, enhanced mountaineering information, and pointers about trip planning via the Worldwide Web, and
- 3) On mountain: all climbers have direct interaction with professional climbing rangers for climbing, safety, and route information. Registration funds also offset the salaries of climbing rangers who manage backcountry camps, coordinate aircraft activities, and manage mountain sanitation programs. The fees also allow for additional ranger and resource protection training.



Mountaineering rangers and volunteers weigh trash at the 7,200-foot camp.

Trash and human waste became an issue in the early 1970s when nearly 300 climbers a year were spending three weeks on the mountain. Most of these people left their garbage behind on the mountain and dug pit toilets to contain their feces on the glacier. In the camps above 14,000 feet, human waste was deposited among small rock outcroppings. Attempts were made by the Park Service and private organizations to clean up some of this debris and educate climbers about proper human waste disposal. In 1977, the Park Service initiated a "climb clean" policy by requiring climbers to pack out all gear, refuse, and fixed line. By 1980, each year 700 climbers were attempting the three-week climb. The Park Service moved to require an educational briefing for climbers before their expeditions up the mountain. In 1999, the rangers and other climbers still reported garbage that was abandoned and human waste that was not disposed of properly. Rangers gave out several citations, but there was still significant non-compliance.

Since 1996, fee revenues have helped rangers continue to make advances in trash and human waste management. Climbers, too, have made progress in complying with the "climb clean" policy, so that conditions on the mountain are better than they've ever been since the early 1970s. However, conditions continue to be less than desired for a once pristine wilderness area.



An illegal open pit latrine at 9,500 feet on Kahiltna Glacier, Mt. McKinley.



Outdoor toilets used on McKinley at camps at 7,200 ft, 14,200 ft., and 17,200 ft.

To further improve trash management, DNP&P began a pilot study to determine the weight of trash generated by climbers and tried to find correlations between the weight of food and packaging efficiency of each expedition to the amount of trash ultimately produced. Data were collected before an expedition departure and all trash was weighed upon return. This study provided invaluable baseline information as well as an important foundation upon which to build in future seasons.

DNP&P also began a small study on the practicality of an expedition removing all of its human waste from the mountain. During the 2000 climbing season, Roger Robinson's Denali patrol used a "clean mountain can" toilet system that is used for river travel. This endeavor met with success and DNP&P expanded this to a trial basis for the public in the 2001 season. Mandatory use of this system by all climbers is recommended.

Mountaineering Program Analysis

The park analyzed collecting fees for enhancements to the Denali Mountaineering Program. This included additional ranger staff and improvements to the resource protection and human waste management programs. It is felt that increased management and improvements were warranted in the handling of human waste and the management of trash on the mountain. Also considered were possible reductions to the Denali Mountaineering Program. Those included staff reductions, removal of the 14,200-foot and 7,200-foot ranger camps and the cancellation of

DNP&P's rescue helicopter contract for the Lama. At its current size and complexity, the Denali Mountaineering program handles visitor services, protection, and resource management appropriately.

The use of and need for a high-altitude helicopter were evaluated in depth. The park uses the helicopter for many of its programs, including rescue. The National Park Service contract high-altitude helicopter is crucial to the safety of the mountaineering rangers and their volunteers. It is a very specialized tool that allows trained staff to minimize risks when either performing a rescue mission or resource protection for the park. The Lama helicopter has saved many lives since 1991, and it is the best aircraft for the high-altitude alpine search and rescue missions. Also, special contract provisions have allowed the NPS to retain the pilot, mechanic, and helicopter manager, which provides continuity for increased safety and familiarity with the park and its programs.

Climbers on other mountains in the park besides Foraker or McKinley are not currently required to record trip information with the Park Service. Because of this, opportunities to educate and share safety and resource protection information are missed. The number of climbers in these areas has been growing, increasing the need for ranger patrols and waste management beyond McKinley and Foraker.

Conclusions

The \$150 fee has been essential to paying for services provided to climbers on Mt. McKinley by the National Park Service. These funds have been used to enhance educational efforts, staff the climbing center, undertake resource management projects, establish safety programs, and begin efforts to clean up the mountain. Though these fees do not pay the majority of the cost of the Denali National Park mountaineering and safety program, the collection of the registration fee has greatly improved the operation.

Through the studies of human waste and trash management, it is estimated that an additional \$50.00 per climber would cover the costs of this special program. This additional funding would provide for one seasonal ranger to manage the program on the mountain, one park ranger to assist in the management of the program at the ranger station in Talkeetna, and expenses related to transporting, cleaning, and purchasing the human waste containers.

Part Three Recommendations

- 1. In order to help recover costs for the human waste management studies, an additional \$50.00 fee should be added to the current \$150.00 climber registration fee. The total fee for climbing Mt. McKinley or Mt. Foraker would then be \$200.00.
- 2. Currently, only climbers of Mt. McKinley and Mt. Foraker are required to register. Initiate required registration for all other climbers in DNP&P. This would help ensure all climbers receive safety and waste management information.

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